

WHAT IS CLAIMED IS:

1. A multi-directional diffusion-symmetry slant reflector, comprising:
a substrate having a pixel thereon;
a plurality of diffusion-symmetric slant reflectors on the pixel, wherein the
5 diffusion-symmetric slant reflectors have a gradual decreasing height from a central
point toward a periphery thereof; and
a reflection layer, formed on the diffusion-symmetric slant reflectors.
2. The reflector of claim 1, wherein the diffusion-symmetric slant reflector has
symmetrical slant surfaces and a plurality of bumps formed on the slant surfaces.
- 10 3. The reflector of claim 2, wherein the angle between the slant surface and the
substrate is about 3° to 10°.
4. The reflector of claim 2, wherein the symmetrical slant surface includes the
surface of a cone whose projection onto the substrate is a circle.
5. The reflector of claim 2, wherein the symmetrical slant surface includes the
15 surface of an elliptical cone whose projection onto the substrate is an ellipse.
6. The reflector of claim 2, wherein the symmetrical slant surface includes the
slant surfaces of a longitudinal prism whose projection onto the substrate is a rectangle.
7. The reflector of claim 1, wherein the substrate is further divided into a
plurality of domains and each domain contains a plurality of diffusion-symmetric slant
20 reflectors all aligned in a single direction.
8. The reflector of claim 7, wherein the direction of alignment of the reflectors in
each domain is different.
9. The reflector of claim 8, wherein the reflectors with different shapes are
mixed in at least one domain.

10. The reflector of claim 1, wherein material forming the diffusion-symmetric slant reflectors includes photosensitive resin.

11. The reflector of claim 1, wherein the reflection layer includes a metal reflection layer.

5 12. The reflector of claim 11, wherein the reflection layer includes aluminum or silver.

13. A multi-directional diffusion-symmetric slant reflector, comprising:

a substrate having a pixel thereon, wherein the pixel is divided into a plurality of domains;

10 a plurality of conical shape diffusion-symmetric slant reflectors on a first portion of the domains of the pixel;

a plurality of longitudinal prismatic shape diffusion-symmetric slant reflectors on a second portion of the domains of the pixel; and

a reflection layer over the diffusion-symmetric slant reflectors.

15 14. The reflector of claim 13, wherein the conical shape diffusion-symmetric slant reflector and the longitudinal prismatic diffusion-symmetric slant reflector both have a symmetry slant surface, and a plurality of bumps are formed on the slant surfaces.

20 15. The reflector of claim 14, wherein the angle between the slant surface and the substrate is about 3° to 10°.

16. The reflector of claim 14, wherein the pair of symmetric slant surfaces of the conical shape diffusion-symmetric reflector includes the surface of a cone whose projection onto the substrate is a circle.

17. The reflector of claim 14, wherein the pair of symmetric slant surfaces of the longitudinal prismatic diffusion-symmetric reflector includes the surfaces of a longitudinal prism whose projection onto the substrate is a rectangle.

18. The reflector of claim 13, wherein the directions of alignment of longitudinal prismatic diffusion-symmetric reflectors inside a domain are identical.

19. The reflector of claim 18, wherein the directions of alignment of longitudinal prismatic diffusion-symmetric reflectors in each domain are different or identical.

20. The reflector of claim 19, wherein the diffusion-symmetric reflectors with different shapes are mixed in at least one domain.

21. The reflector of claim 13, wherein the rectangular diffusion-symmetric reflectors are aligned with a direction different in each domain or mixed up in each domain.

22. The reflector of claim 13, wherein material forming the conical shape diffusion-symmetric reflector and the longitudinal prismatic diffusion-symmetric reflector includes photosensitive resin.

23. The reflector of claim 13, wherein the reflection layer includes a metal reflection layer.

24. The reflector of claim 23, wherein the reflection layer includes aluminum or silver.